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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,534	03/31/2003	Tetsukazu Hukuhara	Q68538	5544

23373 7590 02/18/2005

SUGHRUE MION, PLLC  
2100 PENNSYLVANIA AVENUE, N.W.  
SUITE 800  
WASHINGTON, DC 20037

EXAMINER
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YEE, DEBORAH

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 02/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/070,534	Applicant(s) TETSUKAZU HUKUHARA ET AL.	
	Examiner Deborah Yee	Art Unit 1742	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3-7-02, 11-5-02</u> . | 6) <input type="checkbox"/> Other: ____.  |

### DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 to 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Japanese patent 3-37989 cited by applicant in IDS dated 3-7-02 alone or in view of the English abstract of Japanese patent 360056417.

3. The English abstract of JP'989 discloses a method for continuously heat treating a steel wire comprising the steps of continuously detecting a diameter of said steel wire, and then controlling the amount of energy required for induction heating said steel wire based on the detected wire diameter. Hence the amount of energy released is proportional to a wire diameter of said wire having been detected.

4. Even though prior art does not specifically teach a double tapered steel wire as recited by the claims, such would not be a patentable different since the JP'471 uses a wire in general which would include tapered wire.

5. Even though prior art does not teach a double tapered steel wire having its small-diameter portions be equal to its large-diameter portion in tensile strength as recited by claim 2, such equal strength values would be expected. Note the JP'989 obtains uniformity in heat treatment by accurately controlling the temperature in relationship with the diameter of wire which would in turn produce uniformity in physical properties that would include tensile strength.,

6. In regard to apparatus claims 3 and 5, JP'471 abstract discloses an induction heating means, a wire diameter detection means and a control means for controlling the amount of energy supplied.
7. Even though JP'798 does not teach the quenching and tempering step recited by claim 4, such steps are conventional steps in producing wire as shown in JP'417 and hence would be an obvious modification well within the skill of the artisan to incorporate.
8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over the English abstract of JP360056417 or Kato et al. (US Patent 4,842,818).
9. The abstract of JP'417 and Kato, each teach a tapered steel wire produced with a controlled heat treatment based on dimensions of said wire to produce uniformity in properties. Even though tensile strength as recited by claim 2 is not taught by prior art, such would be expected since uniform heat treatment is performed, and in absence of proof to the contrary.

#### ***Claim Objections***

10. Claim 2 is objected to because of the following informalities: Claim 2, line 6, "heal" should be ---heat---. Appropriate correction is required.

#### ***Information Disclosure Statement***


11. The information disclosure statement filed 3-07-02 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance for JP61-35556, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is

not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on Monday-Friday from 6:00 to 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Deborah Yee  
Primary Examiner  
Art Unit 1742

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